

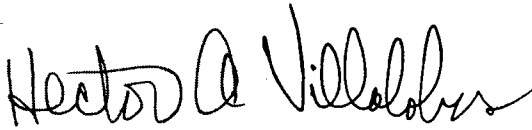
**ENVIRONMENTAL ASSESSMENT
FOR THE INTERIM CLOSURE TO MOTORIZED VEHICLE USE
OF SELECTED ROUTES WITHIN THE
WESTERN RAND MOUNTAINS
AREA OF CRITICAL ENVIRONMENTAL CONCERN
CALIFORNIA DESERT CONSERVATION AREA**

ENVIRONMENTAL ASSESSMENT CA-650-02-69

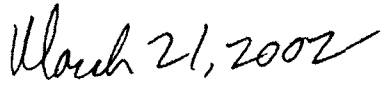
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March 21, 2002

Approved by



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Date

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CHAPTER 1

Purpose and Need: The purpose of this environmental assessment is to identify the effects to the human environment that would result from the implementation of the proposal to close, on an interim basis, selected routes within the Western Rand Mountains Area of Critical Environmental Concern (ACEC) to the use of motorized vehicles. Off-highway vehicles are defined as “...any motorized vehicle capable of, or designated for, travel on or immediately over land, water, or other natural terrain...” (43 CFR 8340.5).

The need for proposing an interim closure in the Western Rand Mountains ACEC is to provide protection to the desert tortoise (*Gopherus agassizii*), a federal threatened species, and associated designated critical habitat, from the adverse effects resulting from the use of motorized vehicles in the affected area. This protective action would be in effect for approximately two years until the Section 7 consultation on the California Desert Conservation Area Plan (CDCA Plan) amendments resulting from the West Mojave Planning effort is completed and decisions are approved for implementation.

Background: The California Desert Conservation Area Plan (CDCA Plan) established the Western Rand Mountains Area of Critical Environmental Concern (ACEC) in 1980. The ACEC is 17,877 acres and is adjacent to the Desert Tortoise Natural Area which is also an ACEC established for the protection of the desert tortoise and its habitat. The Western Rand Mountains ACEC was added at the time of the preparation of the Record of Decision (ROD) for the CDCA Plan. The ACEC area did not undergo a detailed analysis during the planning process, but was added in the final decision on the CDCA Plan based on comments from the public on the draft plan and the proposed plan of the public.

A site-specific ACEC management plan was not developed for the Western Rand Mountains ACEC. Rather, the Bureau of Land Management (BLM) developed a management plan for the entire Rand Mountains and Fremont Valley (65,020 acres), a portion of which (17,877 acres) is the Western Rand Mountains ACEC. When the decision was made to embark on developing a management plan for the entire Rand Mountains and Fremont Valley, approximately 2000 miles of dirt roads and trails existed in the area which resulted from the intensive off highway vehicle use of the area prior to 1980 when the open area designation was changed.

A draft plan for the area was developed and sent to the District Manager for review and approval in 1983, however, that plan was not approved due to habitat protection inadequacies, and the planning process continued.

Subsequent to the rejection of the 1983 proposed plan, the BLM resumed the planning effort after a several year hiatus and prepared a revised draft plan with support from a technical review team (TRT) comprised of representatives from the mining, off-highway vehicle, wildlife protection and livestock grazing communities, and the California Department of Fish and Game. A premise of this planning effort established by the BLM was that the TRT, representing a cross-section of the public interested in the public lands in the affected area, must strive to reach a consensus in a recommendation to BLM for managing the area.

During the time the planning effort was underway, the desert tortoise was listed in 1989 as endangered by the U.S. Fish and Wildlife Service under emergency listing provisions of the Endangered Species Act. At approximately the same time the State Fish and Game Commission listed the desert tortoise as threatened under provisions of the California Endangered Species Act. The U.S. Fish and Wildlife Service listed the tortoise as a threatened species in 1990 under standard procedures.

In the fall of 1989, the BLM placed this area under a temporary emergency quarantine and road closure to protect the tortoise and its habitat. This protective action was lifted in November 1990 after the BLM had reduced the mileage of open routes to 150 miles.

BLM submitted a revised draft plan for managing the Rand Mountains and Fremont Valley to the U.S. Fish and Wildlife Service in compliance with Section 7 of the Endangered Species Act shortly after the species was formally listed as threatened. The U.S. Fish and Wildlife Service evaluated the effects of the draft plan on the desert tortoise and determined that it would jeopardize its continued existence in the management area because of an excessive amount of off-highway vehicle access. The BLM and the TRT resumed work on the draft plan and reduced the amount of proposed designated vehicle routes. Section 7 consultation resumed and the U.S. Fish and Wildlife Service (USFWS) issued a biological opinion for the proposed plan on March 10, 1993.

Under the biological opinion issued for the Rand Mountains Fremont Valley Management Plan (1-6-90-F-54R), the USFWS required the BLM to develop a monitoring and implementation plan to ensure that the management objectives were being met. In this document, the USFWS stipulated that:

“Any level of adverse impact or degradation of the management area should require immediate attention. Compliance with vehicular regulations must be good (light non-compliance) in the southwest corner of the management area (west of R45 and south of R50 - figure 1) and must reach excellent in the remainder of the management area within 2 years of adoption of the Plan. If this objective is not met, the majority of routes in the management area would be closed.” pg 6

The biological opinion contained terms and conditions that were incorporated into the final plan which was completed on June 16, 1994. Critical habitat for the desert tortoise was designated by the U.S. Fish and Wildlife Service in 1994.

Implementation Background: Implementation of vehicle management in the Rands intensified between 1990-92 when the BLM conducted an extensive signing effort to identify the open routes of travel and closed routes in the management unit. Between 1993 and 2000, the BLM constructed a 17 mile long management fence along the area's south boundary. The objective of the fence was to funnel riders entering the public lands onto the open route system and to block access to closed routes. Since construction was started in 1993, this fence has been repeatedly cut by riders. During a single inventory in 1999, BLM staff found 15 separate cuts in the fence line that were later repaired.

Information portals explaining area regulations and rider responsibilities for appropriate OHV use were installed at each of the 11 entry points to the Rand Mountains. These information boards also provided free information sheets/maps that explained the area use regulations and showed the open trail network - thousands of these handouts have been distributed. In 1997 the BLM produced a detailed map of the region showing the open access network - these Cuddeback Lake Desert Access Guides were made available throughout the region in BLM offices and visitor centers. In 1999 the Friends of Jawbone produced a highly detailed riding map of the region showing the open route network and explaining area use regulations - over 20,000 of these free maps were distributed between 1999 and 2001. BLM also produced a series of recreation opportunity guides that provided information on area use regulations and distributed over 10,000 of these through regional visitor centers, BLM offices, local hotels and at large events such as trade shows and county fairs. This same information was made available on the Ridgecrest Field Office web page at <http://www.ca.blm.gov/ridgecrest/>.

In addition to signing and bulletins, starting in 1992 and continuing to the present, OHV rangers, law enforcement rangers and volunteers have made personal contact with thousands of riders within the Rand Mountains to provide handouts on use regulations and to explain in person rider responsibilities when visiting this sensitive area. Law enforcement rangers have conducted numerous special operations in the Rands since 1992 to apprehend and issue citations to riders for violating regulations. Since 1992, 88 citations have been issued in this area for using closed routes or riding cross-country.

Beginning in 1997, efforts were initiated in the Rand Mountains to physically block access to closed routes by using hay bales and short segments of snow fencing. Most of the hay bales and snow fences were vandalized or ridden around within six months of their installation. At the same time, BLM has made an effort to maintain the open routes with adequate signing and occasional road and trail grading.

In 1998 the BLM initiated an extensive restoration program on closed routes in the Rands with a \$125,000 restoration grant from the California State Parks Off Highway Vehicle Management

Division and at least \$50,000 in labor and materials from BLM funds. Under this effort 125 sites received restoration treatments. Over 1,700 desert shrubs were planted on closed routes; 700 hay bales were placed to block closed trails; and over 6 miles of closed route were mechanically ripped to promote revegetation at the entrance to over 125 closed routes. Favorable weather conditions throughout this project provided an above average survival rate for these plantings - 65-70%.

Within six months of this project, September 1998, 24% of these sites had been damaged by vandalism and illegal riding. As of March 2002, many of these restoration sites had received some degree of damage from illegal riding. One project polygon, consisting of 23 restoration sites, in a recent survey showed that 87% of the routes that had been restored were reopened.

OHV Non-Compliance: The issue of rider non-compliance with the designated route system in the Rands has been a concern of the BLM since the area was reopened to OHV use in late 1990. A study conducted by Goodlet and Goodlet in November 1992 examined the issue of rider compliance by surveying 105 miles of open route and by walking 39 transects during the high use Thanksgiving weekend. The survey reported that when trails with closed signs were raked prior to the survey to record new activity - 195 new tracks were created during the six day sampling period for a mean of 11.5 new tracks per closed route sampled. On a comparison sample of unsigned closed routes - 200 new tracks (10.0/trail) were observed. In one high density traffic area during a 4 hour sampling period, researchers observed 65 vehicles passing the monitoring site. Of these riders - 25 were traveling on open routes (38%), 13 traveled on closed routes (20%), and 27 traveled cross-country (42%). In this area 62% of the riders observed were riding in non-compliance with the closure for this area. The presence of a sign indicating that a route was closed to OHV use appeared to have no affect on rider cooperation in the Rands.

A survey conducted by BLM staff along route R5 in April 2000 found that 90% of the closed routes had recently been ridden (Wash & Kotlarski). Another BLM survey around the perimeter of the ACEC in July 2001 recorded 54 closed routes showing recent OHV trespass (Aardahl).

In March 2002 a systematic inventory of route compliance was conducted along BLM designated routes in the West Rand ACEC. On the west side of route R43, in the area proposed for interim closure, the survey found that of the 99 closed routes examined along this 6 ½ mile long road- 92 closed routes had been ridden recently (93%). The survey also found 135 sets of tracks created by cross-country travel in this area. Within the northern section of the ACEC, adjacent to BLM Route R 50, the survey reported that of the 75 closed routes examined - 69 had been recently ridden (92%) and 101 sets of tracks generated by cross-country travel were observed along this 4 ½ mile long route. On the east side of the Desert Tortoise Natural Area, along the primary north-south route traversing the ACEC (Route R5), the survey reported that of the 149 closed routes observed - 145 of these had been recently ridden (97%). In addition to riding on closed routes, 101 sets of new tracks generated by cross-country travel were observed along this route. (Dickes)

It should be noted that in all of these surveys, motorcycles were the dominant vehicle of choice used by individuals trespassing on closed routes. Some ATV use on closed routes was observed while 4-wheel drive intrusions in the Rands have been negligible.

Center for Biological Diversity Lawsuit: On March 16, 2000, the Center for Biological Diversity, and others (Center) filed for injunctive relief in U.S. District Court, Northern District of California (court) against the Bureau of Land Management (BLM) alleging that the BLM was in violation of Section 7 of the Endangered Species Act (ESA) by failing to enter into formal consultation with the U.S. Fish and Wildlife Service (FWS) on the effects of adoption of the CDCA Plan, as amended, upon threatened and endangered species. On August 25, 2000, the BLM acknowledged through a court stipulation that activities authorized, permitted, or allowed under CDCA Plan may adversely affect threatened and endangered species, and that the BLM is required to consult with the FWS to insure that adoption and implementation of the CDCA Plan is not likely to jeopardize the continued existence of threatened and endangered species or to result in the destruction or adverse modification of critical habitat of listed species.

Although BLM has received biological opinions on selected activities, consultation on the overall CDCA Plan is necessary to address the cumulative effects of all the activities authorized by the CDCA Plan on species and their habitats afforded protection under the Endangered Species Act. Consultation on the overall Plan is complex and the completion date is uncertain. Absent consultation on the entire Plan, the impacts of individual activities, when added together with the impacts of other activities in the desert are not known. The BLM entered into negotiations with plaintiffs regarding interim actions to be taken to provide protection for endangered and threatened species pending completion of the consultation on the CDCA Plan. Agreement on these interim actions avoided litigation of plaintiffs' request for injunctive relief and the threat of an injunction prohibiting all activities authorized under the CDCA Plan. These interim agreements have allowed BLM to continue to authorize appropriate levels of activities throughout the California Desert Conservation Area during the lengthy consultation process while providing appropriate protection to the desert tortoise and other listed species in the short term. By taking interim actions to protect these species and their habitats, as allowed under 43 CFR 8341.2 (Special Rules for Off-Road Vehicle Management) and 43 CFR Part 8364.1 (Closures and Restrictions), BLM contributes to the conservation of endangered and threatened species in accordance with 7(a)(1) of the ESA. In doing so, BLM also avoids making any irreversible or irretrievable commitment of resources which would foreclose any reasonable and prudent alternative measures which might be required as a result of the consultation on the CDCA plan in accordance with 7(d) of the ESA.

Lawsuit settlement negotiations resulted in the court approval of a stipulation entitled *All Further Injunctive Relief*. On March 20, 2001, this stipulation became effective. Due to continued non-compliance in the Western Rand Mountains ACEC, the Center filed in February 2002, a 60 day notice of an intent to file a law suit under the Endangered Species Act for failure to comply with the Biological Opinion issued for the Rand Mountains Fremont Valley Management Plan. In March 2002, the BLM and the Center agreed to propose an amendment to the All Injunctive Relief Stipulation by adding the following provision:

“BLM will close and sign all routes within the Western Rand ACEC by March 30, 2002 pursuant to the Rand Mountains Fremont Valley Biological Opinion (1-6-90F 54R). BLM will block major access points needing a physical barrier by September 30, 2002. The closure will not affect administratively approved travel by BLM and its volunteer agents and contractors conducting associated habitat restoration and rehabilitation and other administrative work. The closure will remain in effect until the West Mojave Plan’s Record of Decision is signed.”

This agreement is currently being reviewed by the Court. It is this proposed action, the interim closure of the West Rand ACEC that is the subject of this environmental assessment.

Consistency with other Plans, Policies and Guidance: Executive Order 11644 (“*Use of Off-Road Vehicles on the Public Lands*”) was issued on February 9, 1972 (87 F.R. 2877) for the purpose of establishing policies and procedures to control and direct the use of off-road vehicles on federal lands to; 1) protect the resources of those lands, 2) promote the safety of all users of those lands, and 3) minimize conflicts among the various uses of those lands. Executive Order 11989 (“*Off-Road Vehicles on Public Lands*”) was issued on May 24, 1977 (42 F.R. 26959) for the purpose of amending the previous order. These amendments strengthened protection of the lands by authorizing agency heads to; 1) close areas or trails to the use of off highway vehicles that are causing considerable adverse effects to federal lands and resources, and 2) designate lands as closed to the use of off highway vehicles unless the lands or trails are specifically designated as open to such use.

The BLM developed regulations (43 CFR 8340) in response to the executive orders and subsequent federal laws related to the protection of lands, land resources, and their values in relationship to the use of off highway vehicles. Subpart 8341.2 (Special Rules) states, in part, that “where the authorized officer determines that off highway vehicles are causing or will cause considerable adverse effects upon soil, vegetation, wildlife, wildlife habitat, cultural resources, historical resources, **threatened or endangered species** (emphasis added), wilderness suitability, other authorized uses, or other resources, the authorized officer **shall immediately close the areas affected to the type(s) of vehicle causing the adverse effect until the adverse effects are eliminated and measures implemented to prevent recurrence**” (emphasis added).

Under the Biological Opinion (1-6-90-F-54R) issued for the Rand Mountains Fremont Valley Management Plan in 1993, the U.S. Fish & Wildlife Service required the BLM to develop a monitoring program to ensure the objectives of the plan were being met. The USFWS stipulated that visitor compliance with the management area’s vehicle regulations had to be good (light non-compliance) within the Western Rand Mountains ACEC from R 50 to the southern boundary of the ACEC and excellent from R 50 to the northern boundary of the ACEC by December 1995. Since visitor compliance has not reached this level, given an additional 7 years beyond the USFWS deadline, the proposed action of closing routes within the Western Rand Mountains ACEC, is consistent with the Biological Opinion and the special rules identified in 43 CFR 8341.2.

The Biological Opinion further stated, that if these visitor compliance objectives were not met, the majority of the routes within the Rand Mountains Fremont Valley Management area would be closed. The proposed action of closing routes within the Western Rand Mountains ACEC due to visitor non-compliance, is fully consistent with the Biological Opinion for this management area and the special rules identified in 43 CFR 8341.2.

Conformance with the Land Use Plan: The proposed action of closing certain roads to the use of off highway vehicles in the Western Rand Mountains ACEC is not prohibited under the provisions of the CDCA Plan. Management of off highway vehicles is one of the key components of the Plan, and vehicle route designation for the purpose of managing motorized vehicle access to public lands was required when the Plan was finalized in 1980. The Special Rule provisions of the regulations for the management of off highway vehicles on public land requires that BLM, through the authorized officer, close certain areas to the use of off highway vehicles to prevent considerable adverse effects on the land and associated resources regardless of land use plan designations. The proposed action is consistent with BLM Policy for Special Status Species (Manual 6840), and the CDCA Plan is required to be in compliance with all BLM Manual requirements.

The proposed action is fully consistent with the Biological Opinion issued for the Rand Mountains Fremont Valley Management Plan.

CHAPTER 2

Proposed Action: The proposed action consists of the interim closure of certain dirt roads and trails in the Western Rand Mountains ACEC to the use of motorized vehicles. The specific activities that would occur in association with the proposed action are described as follows:

- 1. Interim closure of BLM Routes R5, R50, R40, R15, R25, R35, R 37, R12 and R 48 as well as all other unauthorized routes and trails in Western Rand Mountains ACEC to the use of motorized vehicles:** This action would consist of developing and approving an interim closure of these motorized vehicle routes (roads and trails); identifying the closed routes on the ground with standard signs.
2. Patrol and maintenance of the proposed interim closure would also occur. Patrol would include monitoring and enforcement for compliance with the closures by law enforcement Rangers. Maintenance would include the upkeep and replacement of existing signs, barriers, and public information stations.

(Note: Exceptions to the proposed closure concerning the use of off highway vehicles include "...any military, fire emergency, or law enforcement vehicle while being used for emergency purposes; any vehicle whose use is expressly authorized by the authorized officer, or otherwise officially approved; vehicles in official use; and any combat or combat support vehicle when used in times of national defense emergencies [43 CFR 8340.0-5(a)(1-5)].

Proposed Future Actions: *These will be analyzed in a later site specific environmental document.*

1. Placing temporary barriers or fences across the entrance to the closed routes to prevent travel by off highway vehicles. To be completed by September 30, 2001.
2. Restoration of the routes closed by the Rand Mountains Fremont Valley Management Plan of 1994 would be conducted within the ACEC with an emphasis on those closed routes that directly intersect the primary access routes affected by this interim action and all hillclimbs.
3. The construction of a continuous fence or segments of wing fences along the west side of route R43 and along the east and west sides of route R5.

No Action Alternative:

Under the No Action Alternative, BLM routes R5, R50, R40, R15, R25, R35, R 37, R12 and R 48 in the Western Rand Mountains ACEC would remain open to motorized vehicle use. The BLM would continue to enforce and implement the closure that was placed upon the other roads and trails in the Western Rand ACEC brought about by the Rand Mountains Fremont Valley Management Plan of 1994.

Chapter 3

General Description of the Affected Environment: The Western Rand Mountains ACEC is located in the southern portion of the Ridgecrest Field Office within the California Desert Conservation Area. The area covers 17,877 acres of public land. Major access to the area is provided by the Randsburg-Red Rock Road and Randsburg-Mojave Road via Highway 14, the Garlock Road and US 395. The communities of Randsburg, Johannesburg and Red Mountain are located to the east of the management area. California City borders the area along its southern boundary and the city of Ridgecrest is located 25 miles to the north.

Land Use: Opportunities for outdoor recreation are present in the Western Rand Mountains ACEC including upland gamebird hunting, motorcycle trail riding, 4-wheel drive exploration, rock hounding, and wildflower viewing. The primary recreation activity in this area currently is motorcycle trail riding.

The California Desert Conservation Area Plan (1980) directs that the area be managed as Multiple-Use Class L (limited) to protect sensitive wildlife resources while providing vehicle access for mineral exploration and recreation.

The ACEC is within the Cantil Common Allotment. Sheep grazing is not currently allowed in this area due to a biological opinion issued from the U.S. Fish and Wildlife Service to the BLM to protect habitat for the desert tortoise.

Specific Components of the Affected Environment: The National Environmental Policy Act requires that components of the human environment that would be affected by the proposed action and alternatives be analyzed and disclosed by the action agency. For the purposes of this analysis, the following components of the human environment have been considered as either affected or not affected.

<u>Component of the Human Environment</u>	<u>Affected</u>	
	<u>Yes</u>	<u>No</u>
Air Quality	X	
Cultural Resources		X
Economic Values		X
Native American Values		X
Permitted Land Use		X
Recreation Use	X	
Social Values	X	
Soil	X	
Vegetation	X	
Wildlife	X	
Water		X

The rationale for the components of the human environment that were determined to not be affected by the proposed action or the alternative of no action is as follows: (Note: Because these components are not considered affected, they will not be addressed in subsequent portions of this analysis).

Economic Values: Economic values are considered not affected. Assuming commercial activities requiring permits or authorization from BLM are the primary activities associated with economic values, it is reasonable to assume that the proposed route closures would have little or no effect on permitted activities that would be addressed on a case-by-case basis.

Access to mining claims and the development of minerals in the area would not be affected because such access and use would be authorized on a case-by case basis under different regulatory circumstances. Casual use mining activity associated with locatable minerals would be affected by the closed vehicle routes. By definition, such casual use would conform to the off highway vehicle management regulations and subsequent vehicle use management decisions for specific areas. Access to mining claims and development of minerals would be addressed on a case-by-case basis under the requirements of the Surface Management Regulations (43 CFR 3809) and would typically require the approval of a mining plan of operations. For the purpose of this analysis, it is assumed that casual use activities associated with management of locatable minerals are not associated with deriving economic values from the area. Rather, economic gains would be associated with mineral development operations approved under a plan of operations or through notices.

Outdoor recreation on the 29 miles of closed route would be affected, however over 100 miles of route would remain open in the Rand Mountains. Directly to the east - 197 miles remain open in the Red Mountain Polygon and over 57,000 acres of open play area in the Spangler Hills; directly to the south - on the private land where most of the staging and camping occurs in the Rand region, there is virtually unlimited riding on the outskirts of California City; to the north - over 700 miles of open routes remain open in the El Paso Mountains Polygon; and to the west - in the Jawbone Butterbrecht ACEC, over 12,000 acres of open play area and over 220 miles of route remain open for motorized vehicle recreation. It is unlikely that the interim closure of 29 miles of route will result in a significant displacement of motorized recreation completely outside of this region. Therefore it is unlikely that this proposed action would result in a measurable economic impact within the rural communities of eastern Kern County.

Native American Values: Native American values in the area would not be affected because the proposed action would continue to allow vehicular and non-vehicular access to the general area. Native American groups or individuals may request authorization to access certain areas of special significance and be exempt from the interim closures. However, such requests have never been received by BLM under the existing situation.

Permitted Land Use: Land uses permitted by BLM that are in conformance with the CDCA Plan would continue to be considered on a case-by-case basis. If authorized, a land use requiring a permit from BLM may involve the use of a closed route if such a use is determined to be in the public interest, not prohibited by the provisions of the CDCA Plan, or not otherwise prohibited by laws, executive orders or policy.

Water: Surface and ground water would not be affected by the proposed action. Ground water is relatively deep throughout the polygon and is not affected by vehicle use.

CHAPTER 4

Environmental Consequences: The analysis of the environmental consequences on the components of the human environment considered affected by the proposed action and no action alternative are as follows. For purposes of the analysis, a description of the current situation is included:

Air Quality

Existing Situation: Air quality throughout the project area is generally good. There are, however, times that the area has not meet air quality standards due to locally generated and/or transported in pollutants. This has led to the current classification of the area as non-attainment for ozone under both the National Ambient Air Quality Standards (NAAQS), and California Ambient Air Quality Standards (CAAQS). Ozone pollutants in the area primarily from transport in from the South Coast air Basin and the San Joaquin Valley air basin. An attainment demonstration for Ozone has been prepared which shows attainment based on reduced transport. The project area is within the Mojave Desert air basin. The Kern County Air Pollution Control District (KCAPCD) has state air quality jurisdiction over the project area. The KCAPCD has rules which include the need for permits for stationary sources such as engines, stack emissions, screening plants and such, and fugitive dust emissions.

All Federal projects (i.e., those subject to analysis under the requirements of the National Environmental Policy Act) are required to conform to provisions of the CAA. A State Implementation Plan (SIP) has been prepared for the Kern Planning Areas with respect to PM-10. This SIP is under development in cooperation with the U.S. Environmental Protection Agency. It identifies sources of PM-10 emissions and control measures to reduce these emissions. Ozone emissions are primarily transported from outside this air basin and have been addressed separately by the Mojave Desert Air Quality Management District.

Section 176 (c) of the Clean Air Act (CAA), as amended (42 U.S.C. 7401 et seq.) and regulations under 40 CFR part 93 subpart W, with respect to the conformity of general federal actions to the applicable implementation plan (SIP) apply to projects within federal non-attainment areas. Under those authorities, "no department, agency or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve any activity which does not conform to an applicable implementation plan". Under CAA 176 (c) and 40 CFR part 93 subpart W, a Federal agency must make a determination that a Federal action conforms to the applicable implementation plan before the action is taken.

Direct and Indirect Effects of Proposed Action and No Action Alternative: The proposed action involves controlling the use of off highway vehicles on dirt roads and trails located on public land. Off highway vehicles operated on dirt roads and trails result in the emission of fugitive dust directly by the passage of the vehicles, and indirectly as a result of wind erosion on exposed soil surfaces. Portions of such fugitive dust would be PM10. Internal combustion engines used in these vehicles would generate unknown levels of particulate and other combustion derived emissions such as nitrogen oxides (NOX) and other ozone precursors. For the purpose of this analysis, the assumption is made that the proposed action would not result in a change in the amount of off highway vehicle use in the Rand Mountains or the emissions generated from the internal combustion engines powering the vehicles.

The implementation of the proposed action would reduce the generation of fugitive dust, and PM-10, through the closure of routes. This would occur due to the reduction in the amount of soil surface that would be directly disturbed by off highway vehicles and susceptible to wind erosion. This would result in lowered emissions of PM-10 due to the stabilization of dirt road surfaces that are currently disturbed by the passage of vehicles. Because there are no increased emissions as a result of the proposed action and the proposed project doesn't exceed the de minimus emission levels no further conformity determination is necessary.

Cumulative Impacts: The cumulative effect area for air resources for the proposed action is the Mojave Desert air Basin. The expected emission levels are within the cumulative National Ambient Air Quality Standards for 24 hour and one year PM-10 emissions. The one hour ozone emission levels are not likely to result in or contribute to exceedances of the National Ambient Air Quality Standards for ozone.

Because of the anticipated reductions in emissions associated with implementation of the proposed action, and that such emissions would be less than for the no action alternative (current situation). The proposed action would contribute to better air quality through the reduction of PM-10 in the polygon. The specific amount of PM-10 reduction has not been determined. Such a determination would be very difficult because the effect of route closures on the number of vehicle miles driven on dirt roads in the Western Rand Mountains ACEC, and the other areas where similar interim vehicle route closures are planned, cannot be determined. It is expected that vehicle travel will increase on some of the roads available for use because of the closures.

Cultural Resources

Existing Situation: Humans have likely occupied the northern Mojave Desert, including the region containing the Western Rand Mountains ACEC since approximately 12,000 years B.P., although the activities associated with the oldest occupation period are poorly understood because of lack of research. From about 12,000 to 8,000 years B.P., human activities in the region were likely subsistence gathering and utilization of natural resources

occurring along the margins of pluvial lakes. The region was much wetter and vegetation much more lush than at present. Environmental conditions became drier during the period from about 8,000 to 6,000 years B.P. During this time the lush lowlands associated with pluvial lakes and rivers became drier and human occupants likely dispersed to higher elevation sites where resources were more available and diverse. Food collecting and trade pathways became established by about 5,000 years B.P and continued into the historic period. This period of human occupation is characterized by the use of food processing tools such as manos, metates, mortars and pestles, and the use of various projectile points for hunting.

The record of human inhabitants of this area consists of a variety of prehistoric and historic sites. Prehistoric features are likely to include lithic scatters associated with stone tool production, hearth and shelter sites, and seed milling locations. Historic sites are predominantly associated with the region's mining history which began with the discovery of gold in 1895 near present day Johannesburg and Randsburg. Historic features in the area are likely to contain mine workings (esp. shafts and adits) and can dumps associated with habitation sites. The West Rand ACEC has not been surveyed extensively for cultural resources and currently there are no National Register properties within the proposed project area.

Direct and Indirect Effects of Proposed Action and No Action Alternative: Closure of routes in the Western Rand Mountains ACEC would reduce impacts to cultural resources from recreational vehicle use, however the level of reduction cannot be quantified due to lack of information on cultural resources in the ACEC. There is currently no data at all on how many sites have been affected by off highway vehicles or how serious the effects have been.

Cumulative Effects: The proposed action would contribute to the protection of cultural resources that are being affected by vehicle use within tortoise critical habitat in the western Mojave Desert in the Western Rand Mountains ACEC. Conversely, the no action alternative would contribute to the continued impacts to cultural resources that are being affected by the current level of off highway vehicle use in tortoise critical habitat. The scope of either protection or impacts is unknown because of the lack of information available for cultural resources in the ACEC.

Social Values

Current Situation: Social values in the area are diverse and nearly all of them are related to accessing the area by off highway vehicle, assuming that social benefits are derived from the public being able to see or experience the diverse landscape. The enjoyment the public derives from the values of the specific resources found on public lands within the ACEC is pertinent in addressing the effects of the proposed route closures. Social values associated with the ACEC are primarily related to recreation opportunity. In addition to the social

benefits of outdoor recreation, the public also places a high priority on environmental protection and conservation, conserving endangered species of plants and animals and protecting scenic quality.

Direct and Indirect Effects of Proposed Action and No Action Alternative: The closure of these 29 miles of route would render 17,877 acres of public land not accessible by motorized vehicle, the predominant mode of transportation in this area. The proposed route closures will provide conditions that are more conducive to protecting the desert tortoise and critical habitat from the effects of off highway vehicle use.

Cumulative Effects: The effects of the road closures in the ACEC will be added to those for the five polygons in the western Mojave Desert that are also under an interim closure order (Red Mountain, Fremont, Kramer, Newberry Rodman, and Superior Polygons). These interim closures will be in place pending completion of the West Mojave planning process which is expected in June of 2003. These polygons affect 834,311 acres of public land in the western portion of the California Desert Conservation Area.

Under the no action alternative there would be no additional interim route closures and no affect to off-road vehicle use activities in the Western Rand Mountains ACEC. However, additional route designation actions may occur in this area through the CDCA Plan Amendments generated by the West Mojave Multi-species Conservation Plan, which is expected to be completed in approximately two years. There would be no impact to off-road vehicle based recreation from the no action alternative as vehicle use opportunities would continue to be allowed on the 29 miles of designated roads and trails in the ACEC.

Recreation

Current Situation: Limited opportunities for outdoor recreation are present in the Western Rand Mountains ACEC. The ACEC is used for upland gamebird hunting, motorcycle trailriding and 4-wheel drive touring. Seasonal wildflower displays are notable in the ACEC, as well as the region as a whole, during years when winter rainfall is adequate for germination. There are currently 6 upland gamebird drinkers within the ACEC. Camping, all recreation permitted events and recreational shooting are not permitted within the ACEC under the Rand Mountains Fremont Valley Management Plan. The area is currently not used for any non-motorized commercial or competitive recreation activities.

Direct and Indirect Effects of Proposed Action and No Action Alternative: The interim closure of 29 miles of routes would eliminate, for the period of the closure action, all motorized recreation opportunities within the 17,877 acre interior of the ACEC. This closure would directly impact the single-track motorcycle trail riding experience within the Rand Mountains since 5 of the 9 routes proposed for closure are challenging motorcycle trails (R

15, R 25, R 35, R 12 and R37). These trails would account for approximately 16 of the 29 miles of proposed route closure or 55% of the motorized opportunity in the ACEC.

The remaining routes proposed for interim closure (R 5, R 50, R 40 and R 48) are accessible by four wheel drive vehicles as well as motorcycles. These routes provide access to the region for the majority of recreation visitors. Virtually all of the upland gamebird hunting that currently occurs within the ACEC is highly dependant upon motorized vehicle transport. The closure of these 13 miles of four wheel drive route would directly impact upland gamebird hunting in the western portion and along the foothill region of the northern portion of the ACEC. Motorized access to 5 of the 6 upland gamebird drinkers within the ACEC would be curtailed for the general public - access for maintenance by the California Department of Fish & Game and Quail Unlimited would be authorized by the BLM during the interim closure period. The interim closure would directly impact the ability of many hunters to utilize the western and northern regions of the ACEC. Much of the interior of this 17,877 acre area is mountainous, not easily accessible by four wheel drive vehicle, and hence not heavily utilized for vehicle dependant hunting activity.

Under the interim closure, the ACEC would remain open to hiking, equestrian, mountain bike, upland game bird hunting and other forms of non-motorized vehicle dependant recreation.

Indirect impacts from this proposed action may result in an increase in motorized recreation pressure on the remaining 100 miles of designated roads and trails that are open to the east of the ACEC. Impacts associated with this dispersal could include increased trail deterioration on the remainder of the designated system in the Rands resulting in a decrease in visitor satisfaction and a potential increase in related impacts due to trail widening and braiding.

Cumulative Impacts: The reduction of available routes in the Rand Mountains and the increase in BLM presence may cause some vehicle recreationists to relocate their activities to other parts of the desert. As part of the public outreach program, BLM will encourage use of the Spangler Hills, Jawbone Canyon, Dove Spring Canyon, Stoddard Valley and Johnson Valley Open Areas. These off highway vehicle open areas offer a less formal management approach and the opportunity for cross-country vehicle travel. However, it is reasonably foreseeable that some visitors will relocate to other areas in the desert. It is impossible, however, to predict where this dispersed use will occur or what future impact it will cause.

In addition to these proposed interim closures in the Western Rand Mountains ACEC, the Red Mountain, Fremont, Kramer, Newberry Rodman, and Superior Polygons, and the Edwards Bowl area, are all under interim closures for certain off highway vehicle routes. These interim closures are in place pending completion of the West Mojave planning process which is expected in June of 2003. These polygons affect 834,311 acres of public land in the western portion of the California Desert Conservation Area, as follows:

<u>Polygon Name</u>	<u>Affected Public Land (Acres)</u>
Newberry-Rodman	81,585
Red Mountain	120,199
Fremont Peak	222,750
Superior Valley	271,528
Kramer	133,129
Edward's Bowl	5,120

Under the no action alternative there would be no additional route closures in the Western Rand Mountains ACEC. There would be no impact to off highway vehicle based recreation from the no action alternative as vehicle use opportunities would continue to be allowed on the 29 miles of designated roads and trails in the ACEC.

Soil

Current Situation: Plant communities are fully dependent on stable soils and adequate soil moisture, and wildlife populations are inextricably linked to plant communities. In the Western Rand Mountains ACEC, soil erosion classes include areas that are rated high, medium and low. Erosion results from the action of wind and water on soil particles. Erosion is a natural process, however accelerated erosion from the effects of human related activity also occurs and results in loss of soils, plant communities and wildlife populations.

Areas of high soil erosion susceptibility are located on steep slopes; areas where soils are shallow; and areas where soil texture is fine and easily compacted. Also included in this category are areas where soil surface crusts provide protection to fine textured soils that could be easily lost by mechanical means, such as use by motorized vehicles. In the Western Rand Mountains ACEC, this erosion class is associated with steeper topography where soils are shallow, especially in areas within the interior of the ACEC.

Areas of moderate soil erosion susceptibility are areas where soil surface textures are medium. These soils are subject to wind and water erosion if disturbed. Topography in these areas range from level to moderate slopes. This class applies generally to the northern portion of the ACEC between the foothills of the Rand Mountains and the Koehn drylake and the Fremont Valley.

In general, the Western Rand Mountains have a moderate erosion condition rating. Areas of greater erosion potential occur within the mountainous interior which makes up a large portion of the ACEC. These areas are susceptible to accelerated erosion by both wind and water if plant communities are lost due to mechanical effects. Evidence of severe erosion

is evident in the many deeply gullied hillclimbs found throughout the interior mountains of the ACEC.

Direct and Indirect Effects of the Proposed Action and No Action Alternative: The proposed closure of certain routes, especially those located on moderate to steep slopes, may provide some degree of soil protection from erosion caused by the passage of off highway vehicles. Such protection is likely to be very limited because of the two year time frame associated with the proposed route closures, and the fact that once soils are affected by the removal of the protective vegetative cover and coarse materials such as rock or gravel, water erosion resulting from moderate to heavy rainfall events where runoff is likely is almost certain to occur.

The no action alternative would continue the current level of off highway vehicle access into the ACEC. There would not be any additional adverse effect to soils through this alternative in that the current situation is in conformance with state and federal laws concerning air quality. This alternative would not provide the unspecified or unquantified benefits to air quality that would be associated with the proposed route closures.

Cumulative Effects: The cumulative effects of the road closures proposed for the Western Rand Mountains ACEC, when added to those in the other five polygons in the western Mojave Desert will provide unspecified, beneficial effects to soil due to a reduction in erosion rates.

Vegetation

Current Situation: The area supports a diversity of vascular plant species. Previous work done by Berry (1978a) and Henry (1982) has identified 154 species of annual and perennial plants within the boundaries of the Desert Tortoise Natural Area which is located adjacent to the ACEC. Three primary vegetation communities have been described in the ACEC. These are:

a. Creosote Bush Scrub

This community occupies the well-drained bajadas from 2,000-3,000 feet in elevation. The dominant species is creosote bush (*Larrea tridentata*) with an understory of low perennial shrubs. Most common are: burrobrush (*Ambrosia dumosa*), goldenhead (*Acamptopappus sphaerocephalus*), cheesbush (*Hymenoclea salsola*), winterfat (*Krascheninnikovia lanata*), spiny hopsage (*Grayia spinosa*), Anderson thornbush (*Lycium andersonii*), and peach thorn (*Lucium cooperi*). Two perennial grasses are common - Indian rice grass (*Achnatherum (Oryzopsis) hymenoides*) and desert needlegrass (*Achnatherum (Stipe) speciosa*).

b. Creosote Bush - Rocky Slopes

The bajadas grade up into the Rand Mountains in the south of the ACEC up to an elevation of 3,100 feet. The rocky slopes support a community that is affiliated with Creosote Bush Scrub, with the addition of the following low perennial shrubs: California buckwheat (*Eriogonum fasciculatum*), Nevada joint-fir (*Ephedra nevadensis*), and terete-leaved rubber brush (*Chrysothamnus teretifolius*). In canyon washes, additional species that are present are paperbag bush (*Salazaria mexicana*), Mojave horsebrush (*Tetradymia stenolepis*), and cheesebush (*Hymenoclea salsola*).

c. Joshua Tree Woodland

This community occupies the upper portions of the Western Rand Mountains ACEC. Species composition includes those found in the Creosote Bush Scrub community, with the addition of Joshua Tree (*Yucca brevifolia*) as the overstory dominant. The understory is comprised of a diversity of perennial shrubs and includes local abundances of perennial bunchgrasses.

d. Special Status Species

No special Status Species of plants have been found within the ACEC

Direct and Indirect Effects the Proposed Action and Alternative: Vegetation communities will be better protected through the interim route closures proposed. Road closures will reduce the amount of land susceptible to the effects of off highway vehicles. These effects include the direct loss of plants due to the operation of vehicles off of established road surfaces. There will be a complete reduction in routes available for off highway vehicle use within the ACEC during the interim closure, which will also reduce the extent to which vegetation adjacent to the roads and trails is affected by dust generated by the passage of vehicles; subsequent erosion by wind after the soil surface is disrupted by vehicles; and by vehicles braiding or riding parallel to open routes - a common practice in the Rands.

Cumulative Effects: The proposed vehicle route closures, combined with other similar closures in critical habitat to the south and east of the Western Rand Mountains ACEC, would significantly reduce impacts to plant communities and provide a greater degree of protection for the vegetation components of critical tortoise habitat.

Threatened and Endangered Species

Current Situation: For the purposes of this analysis, the desert tortoise will be the only wildlife species considered. The desert tortoise was listed in 1989 as a State threatened species, and by the U.S. Fish and Wildlife Service as a federal threatened species on April 2, 1990. The Recovery Plan for the Mojave Population of the desert tortoise, prepared by the U.S. Fish and Wildlife Service in 1994 contains a summary of the current situation regarding the Mojave population of the desert tortoise. The major findings in 1994 were:

The reasons for the listing were declines in tortoise populations attributed to deterioration and loss of habitat, collection for pets and other purposes, elevated levels of predation, loss from disease, and the inadequacy of existing regulatory mechanisms to protect desert tortoises and their habitat. Critical habitat for the Mojave population of the desert tortoise was designated by the U.S. Fish and Wildlife Service in 1994. Critical habitat is considered necessary for the recovery of the species.

The most serious problem facing the remaining desert tortoise populations in the Mojave region is the cumulative load of human and disease-related mortality accompanied by habitat destruction, degradation and fragmentation. Desert tortoises are often struck and killed by vehicles on roads and highways, and mortality of desert tortoises due to gunshot and off-highway vehicles is common in parts of the Mojave region.

In drought years, tortoises forage over larger areas and thus have a greater probability of encountering potential sources of mortality. Roads and urban areas form barriers to movement and tend to create small, local populations which are more susceptible to extinction than large, connected ones.

The Bureau of Land Management manages Category I desert tortoise habitat (in which the Western Rand Mountains ACEC is located) to maintain stable, viable populations of the desert tortoise; to protect the existing tortoise habitat values; and increase populations where possible.

In the western Mojave, desert tortoises occur primarily in valleys, on alluvial fans, bajadas, and rolling hills in saltbush, creosote bush, and scrub steppe plant communities. In the Western Rand Mountains ACEC, tortoises have also been found in washes, hillsides and ridges. Pristine washes and washlets are especially important to tortoises in providing travel routes and the banks are prime feeding areas.

Due to the low rates of population growth exhibited by the desert tortoise, expected to be 1% even under favorable conditions, no population can stand loss rates of breeding adults as high as those reported in the populations of the Mojave region (approx. 60 % decline from 1978 to 1992) without serious threat of extinction.

Recovery over the large area where the Mojave population occurs will depend on management actions tailored to the needs of specific areas. The recovery strategy is based on establishing recovery units, establishing a system of Desert Wildlife Management Areas (DWMA) within recovery units, and implementation of specific actions within DWMA. The Fremont-Kramer DWMA in the Western Mojave Recovery Unit, in which the Western Rand Mountains ACEC is located, supports an estimated 5-100 adult tortoises per square mile of habitat and is rated among the areas experiencing the greatest degree of threat with respect to desert tortoise survival.

Recommended management actions in all DWMAs to protect remaining tortoise populations and achieve recovery include, but are not limited to 1) not allowing uncontrolled dogs out of vehicles, 2) eliminate dumping and littering, 3) preventing the discharge of firearms except for hunting of big game or upland game birds from September through February, and 4) controlling vehicular access. The latter includes recommended actions that include emergency closures of dirt roads and routes as needed to reduce human access and disturbance in areas where human-caused mortality of desert tortoises is a problem (emphasis added) (U.S. Fish and Wildlife Service. 1994).

The Western Rand Mountains ACEC is within critical habitat for the desert tortoise as designated by the U.S. Fish and Wildlife Service in 1994, and is identified as Category 1 Desert Tortoise Habitat in the California Desert Plan as amended in 1989. The Management goal for Category I is to “maintain stable, viable populations and increase populations where

possible.” In an attempt to further refine tortoise habitat quality within these categories, the BLM used four habitat modeling parameters (desert tortoise density; land form type and degree slope; elevation; and a desert tortoise quality index application) to categorize areas as low, medium, high or non Desert Tortoise Emphasis Zones (DTEZ). Within the Western Rand Mountains ACEC, the entire area is located within a high DTEZ.

The desert tortoise has been studied extensively throughout the western Mojave desert since 1975. A study plot in the Fremont Valley in the northern section of the ACEC is considered the best indicator of tortoise populations throughout Fremont Valley. A preliminary review of desert tortoise demographic data collected on the Fremont Valley study plot in 2001, found that the number of adult tortoises occurring in the area was less than 15 adults per square mile. In 2001, the tortoise census on this study plot revealed there was a combined total of 15 adult and subadult animals, with a majority being in the subadult category that have not reached reproductive age. In contrast, there were 33 adult and subadult tortoises on this study plot in 1991. Thus, there has been a 54.5 percent decline in the adult and subadult tortoise population over the past 10 years. Also in the past 10 years there has been a 79.3 percent decline in the tortoise population on the plot that comprise all age classes (101 total in 1991 and declining to 21 in 2001) (Berry, USGS, personal communication).

Tortoise populations at minimum densities (10 adults per square mile) require at least 200 to 500 square miles of secure habitat to be genetically viable and to persist over the next 50 years. The minimum population of adult tortoises required to sustain populations that are relatively resistant to extinction over a 50 year period of time is 50,000. The recommended habitat reserve size to allow tortoises to persist into the future in the Mojave Desert is 1000 square miles (U.S. Fish and Wildlife Service 1994). The ACEC is but a small part of the critical habitat for the tortoise, but it is a significant part because of the nature of the habitat, the historic populations of desert tortoises in the area, and its proximity to the DTNA. Based on the recovery goals in the Recovery Plan for the Mojave Population of the Desert Tortoise, the ACEC as well as the western Mojave recovery area is not meeting recovery goals.

The habitat for the desert tortoise in many portions of the ACEC is still largely intact, although it has been affected by mining, fires, livestock, vehicle use, the close proximity to agricultural fields in the Fremont Valley, and associated human activities. Given its relative isolation from any human residential development and the elimination of sheep grazing from the critical habitat in the early 1990's, there are fewer known human threats to tortoises in the area than in other areas closer to the influence of residential development and larger population centers. Therefore, although tortoises may have been partially extirpated from the area, the habitat may still have the potential to support the densities of animals observed in the late 1970's and early 1980's.

Direct and Indirect Effects of Proposed Action and No Action Alternative: The effects of roads and the associated human activities that occur in the ACEC have been the subject of various studies. A comprehensive review of the scientific and professional literature

concerning the effects of roads, motorized vehicles, and motorized vehicle related human activities was conducted as part of this analysis.

The physical closure of 29 miles of designated vehicle routes in the ACEC to off highway vehicle use is expected to provide a significant amount of protection to the desert tortoise over the interim period it is in effect. This reduction in the number of routes of travel available for use will reduce the incidence of the following with respect to the desert tortoise and its survival in the ACEC:

1. Direct loss of individuals from mortality on roads, within the 300 foot vehicle parking zone on either side of designated routes allowed in the CDCA Plan, and loss due to unauthorized vehicle use off of existing routes (studies indicate that the incidence of unauthorized vehicle use is proportional to the amount of routes available for vehicle travel).
2. Direct and indirect loss of individuals as a result of human access and human activities, including poaching, vandalism, harassment, and the introduction of disease organisms, primarily Upper Respiratory Tract Disease (URTD) through the release of infected pet tortoises.
3. Direct and indirect loss of individuals as a result of human caused wildfires caused by vehicle exhaust, unauthorized campfires, firearm use, discarded cigarettes, etc. Wildfire not only can kill tortoises by direct heat but also by habitat loss and elimination of cover and food supplies. Creosote, one of the most important cover plants for tortoises is extremely susceptible to fire and will not resprout after a burn. Repeated fires eventually results in an area of weedy exotic annuals devoid of shrubs.
4. Indirect effects on tortoises due to vehicle noise and dust. The latter affects vegetation that comprises food and cover for individual animals.

These effects of vehicle use and human use associated with vehicle access have been documented in the western Mojave Desert in the vicinity of the Western Rand Mountains ACEC as well as other management units in the western Mojave (Berry, et al. 1990). Long term studies of desert tortoise populations have been conducted by the BLM and USGS with support from the Fort Irwin and other agencies and educational institutions throughout the California Desert, including the western Mojave Desert, since approximately 1975. The Fremont Valley study plot, approximately 2 miles to the northeast of the ACEC, has been studied since 1975.

Berry (1988) summarized the results of various desert tortoise studies conducted on trend plots and other sites in the Mojave Desert. Several factors were identified as contributing to abnormally high tortoise population losses: 1) vandalism and shooting, 2) raven predation, 3) vehicle kills and poaching, 4) trampling by sheep grazing, and 5) habitat deterioration.

Without exception, the declines were attributed to human activities. In the Fremont Valley study site, vandalism, gunshot deaths, and vehicle kills accounted for 41% of the mortality. Overall in the western Mojave Desert, tortoise population losses of 50 to 60 % have occurred over a period of 6 to 7 years from 1976 to 1982. Declines in these populations have been ongoing for decades because of human activities and land uses.

Although the desert tortoise has been fully protected in California since 1961 through regulation of the California Fish and Game Commission, remains of tortoises killed by gunshot were frequently seen in parts of the California Desert. From 1972 to 1982, a study of tortoise gunshot mortality was conducted on 11 sites in the California Desert. The highest incidence of gunshot deaths of desert tortoises occurred in the western Mojave Desert at the Fremont Valley site, the Desert Tortoise Natural Area, and the Fremont Peak site (located southeast of the ACEC). The percent of tortoises dying on the study sites due to gunshots were 28.9 % at Fremont Valley, 19.6% at the Desert Tortoise Natural Area, and 16.7% at the Fremont Peak. In contrast, the incidence of such deaths in the eastern Mojave Desert sites ranged from 1.8 to 3.1 %. California Department of Fish and Game wardens reported that they occasionally found tortoises dead from gunshots near roads in eastern Kern and northwestern San Bernardino Counties during the 1960s and 1970s. Between 1981 and 1984, Bureau of Land Management and other observers found the remains of 10 tortoises shot and killed in the western Mojave Desert in the vicinity of the Desert Tortoise Natural Area, El Paso Mountains, Fremont Peak and Stoddard Valley. Higher incidences of gunshot deaths of tortoises in the western Mojave was attributed to the higher numbers of human visitors, greater vehicular access and closer proximity to urban centers.

The removal of these impacts over this 17,877 acre area would affect about 420 adult tortoises (15 adults per square mile x 28 square miles) reducing the affects of the human-related impacts discussed above. With the low numbers of tortoises range-wide, these individual adult tortoises are a vital genetic resource for the future recovery of the species. The reduction of stress on these animals, especially during drought and disease, will enhance the survivability of these adults. Another affect of the proposed action will be a reduction in the mileage of access routes that could be used for the release of tortoises infected with URTD into this population of approximately 420 adult tortoises.

The No Action alternative would allow the current situation to continue, and the information contained in the literature (Chapter 6 - Literature Cited & Reviewed) indicates that adverse effects to the desert tortoise and its habitat is occurring, in part, due to vehicular access and associated human activities. This would have a negative affect on the estimated 420 adult and other age class tortoises in the Western Rand Mountains ACEC.

Cumulative Effects: The cumulative effects are those proposed actions for the Western Rand Mountains ACEC combined with the effects of similar actions proposed for other polygon areas in the western Mojave Desert. The cumulative beneficial effects to the desert tortoise throughout all the critical habitat in the western Mojave is expected to provide a significant

level of interim protection to the desert tortoise, which has undergone catastrophic declines in the western Mojave Desert over the past 15-20 years. Conversely, the no action alternative would allow the existing situation to continue, thus driving the desert tortoise closer to the possibility of extinction in some areas due to the adverse effects of vehicle use and associated human activities. The literature clearly indicates that cumulative adverse impacts to the desert tortoise include human and human related activities occurring within habitat of the tortoise.

Chapter 5

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Chapter 6

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